

WHAT IS CLAIMED IS:

1. A speaker system comprising:  
a main speaker; and  
a subordinate speaker; wherein  
a pseudo-spherical wave having the main speaker at a center thereof is generated such that both speakers are vibrated in a frequency range of piston vibration and are in phase with each other and a propagation speed of a sound wave produced by vibration of the subordinate speaker is less than a propagation speed of a sound wave produced by vibration of the main speaker.
2. A speaker system as claimed in claim 1, wherein the main speaker and the subordinate speaker are arranged substantially on the same surface so as to face in the same direction and so as not to lie one on top of another and such that the subordinate speaker is vibrated with a smaller amplitude than the main speaker.
3. A speaker system as claimed in claim 2, wherein a diameter of the subordinate speaker is greater than a diameter of the main speaker, and the subordinate and main speakers have the same axis.
4. A speaker system as claimed in claim 3, wherein a plurality of the subordinate speakers are provided and the farther the subordinate speaker is located from the main speaker, the smaller amplitude with which the subordinate speaker is vibrated.
5. A speaker system as claimed in claim 2, wherein a plurality of the subordinate speakers are provided, the main speaker is disposed in the center, and the subordinate speakers are arranged around the main speaker so as to have the same center.

6. A speaker system as claimed in claim 5, wherein the plurality of subordinate speakers are located at different distances from the main speaker, and the farther the subordinate speaker is located from the main speaker, the smaller amplitude with which the subordinate speaker is vibrated.

7. A speaker system as claimed in claim 5, wherein the plurality of subordinate speaker includes two subordinate speakers, the main speaker and the two subordinate speakers have substantially the same acoustic characteristics, and the main speaker is arranged between the two subordinate speakers, wherein the subordinate and main speakers are arranged so as to be substantially linear in a direction which is substantially perpendicular to a sound wave propagation direction, and wherein a first signal line, in which the two subordinate speakers are connected in series, and a second signal line, in which the main speaker is connected, are connected in parallel.

8. A speaker system as claimed in claim 1, further comprising a plurality of subordinate speakers, the main speaker and the plurality of subordinate speakers are arranged so as to lie one on top of another with a fixed space therebetween, the main speaker is disposed in the center, and wherein each of the main speaker and the subordinate speakers is provided with a sound wave propagation opening portion such that a sound wave radiated from each speaker is radiated in a direction which is substantially perpendicular to the propagation direction the sound wave.

9. A speaker system as claimed in claim 8, wherein the main speaker and the plurality of subordinate speakers have substantially the same acoustic characteristics and the speakers are arranged such that the main speaker is disposed between the subordinate speakers, wherein the sound wave propagation opening portion corresponding to the main speaker and the sound wave propagation opening portion corresponding to the subordinate speaker have substantially the same opening area, and wherein a first signal line, in which the subordinate speakers are connected in

series, and a second signal line, in which the main speaker is connected, are connected in parallel.

10. A speaker system as claimed in claim 8, wherein the main speaker and the plurality of subordinate speakers have substantially the same acoustic characteristics and the speakers are arranged such that the main speaker is disposed between the subordinate speakers, wherein the opening area of the sound wave propagation opening portion corresponding to the main speaker is smaller than the opening area of the sound wave propagation opening portion corresponding to the subordinate speaker, and wherein the main speaker and the subordinate speakers are connected in parallel to an audio signal line.

11. A speaker system comprising:

a main speaker; and

at least one subordinate speaker; wherein

the main speaker and the at least one subordinate speaker are arranged such that a pseudo-spherical wave having the main speaker at a center thereof is generated and the main speaker and at least one subordinate speaker are vibrated in a frequency range of piston vibration and are in phase with each other and a propagation speed of a sound wave produced by vibration of the subordinate speaker is less than a propagation speed of a sound wave produced by vibration of the main speaker.

12. A speaker system as claimed in claim 11, wherein the main speaker and the at least one subordinate speaker are arranged substantially on the same surface of a substrate so as to face in the same direction and so as not to lie one on top of another and such that the at least one subordinate speaker is vibrated with a smaller amplitude than the main speaker.

13. A speaker system as claimed in claim 12, wherein a diameter of the at least one subordinate speaker is greater than a diameter of the main speaker, and the at least one subordinate speaker and main speaker have the same axis.

14. A speaker system as claimed in claim 13, wherein the at least one subordinate speaker includes a plurality of the subordinate speakers, and the farther the subordinate speaker is located from the main speaker, the smaller amplitude with which the subordinate speaker is vibrated.

15. A speaker system as claimed in claim 12, wherein the at least one subordinate speaker includes a plurality of the subordinate speakers, the main speaker is disposed in the center, and the plurality of subordinate speakers are arranged around the main speaker so as to have the same center.

16. A speaker system as claimed in claim 15, wherein the plurality of subordinate speakers are located at different distances from the main speaker, and the farther the subordinate speaker is located from the main speaker, the smaller amplitude with which the subordinate speaker is vibrated.

17. A speaker system as claimed in claim 15, wherein the plurality of subordinate speaker includes two subordinate speakers, the main speaker and the two subordinate speakers have substantially the same acoustic characteristics, and the main speaker is arranged between the two subordinate speakers, wherein the subordinate and main speakers are arranged so as to be substantially linear in a direction which is substantially perpendicular to a sound wave propagation direction, and wherein a first signal line, in which the two subordinate speakers are connected in series, and a second signal line, in which the main speaker is connected, are connected in parallel.

18. A speaker system as claimed in claim 11, wherein the at least one subordinate speaker includes a plurality of the subordinate speakers, the main speaker and the plurality of subordinate speakers are arranged so as to lie one on top of another with a fixed space therebetween, the main speaker is disposed in the center, and wherein each of the main speaker and the subordinate speakers is provided with a sound wave propagation opening portion such that a sound wave radiated from each

speaker is radiated in a direction which is substantially perpendicular to the propagation direction the sound wave.

19. A speaker system as claimed in claim 18, wherein the main speaker and the plurality of subordinate speakers have substantially the same acoustic characteristics and the speakers are arranged such that the main speaker is disposed between the subordinate speakers, wherein the sound wave propagation opening portion corresponding to the main speaker and the sound wave propagation opening portion corresponding to the subordinate speaker have substantially the same opening area, and wherein a first signal line, in which the subordinate speakers are connected in series, and a second signal line, in which the main speaker is connected, are connected in parallel.

20. A speaker system as claimed in claim 18, wherein the main speaker and the plurality of subordinate speakers have substantially the same acoustic characteristics and the speakers are arranged such that the main speaker is disposed between the subordinate speakers, wherein the opening area of the sound wave propagation opening portion corresponding to the main speaker is smaller than the opening area of the sound wave propagation opening portion corresponding to the subordinate speaker, and wherein the main speaker and the subordinate speakers are connected in parallel to an audio signal line.